

this plant during the revision work (p. 248) in 1994.

Phyllanthus rotundifolius Klein ex Willd. Sp. Pl. 4: 584.1805; Hook.f. Fl. Brit. India. 5: 299.1887; Gamble, Fl. Madras 2: 903. 1957 (repr. ed.); Henry, A.N. Fl. TN. II: 238. 1987.

Prostrate herbs with long, woody, thick taproot; stems round or compressed, glabrous; stipules linear, white, c. 1.5 x 0.4 mm. Leaves simple, alternate, fleshy, sub-orbicular to obovate-spathulate, 2 x 2 - 4 x 4 mm, glabrous above, glaucous below, base rounded-cuneate, margin entire, apex obtuse or rounded, apiculate; petiole to 1 mm, pale yellow. Male flowers: 2-3 per axil, usually together with one female flower; male flowers: pedicels 0.5 mm long; tepals 6, elliptic, 0.3 x 0.2-0.7 x 0.5 mm, pale yellowish-green midrib; stamens 3, small, filaments connate in the lower half; anthers to 0.3 mm across. Female flower: pedicel to 0.8 mm long; tepals 6, the outer ovate, 1.5 x 1.2 mm, the 3 inner obovate, 1.8 x 1 mm, obtuse, white with a broad median green band; ovary sessile, subglobose, 0.5 x 0.7 mm, smooth; styles free, to 0.4 mm, at first suberect, later divaricate to

spreading, bifid stigmas, slightly swollen at apex. Capsules depressed-subglobose, 1 x 2 mm, smooth, yellowish-brown; fruiting pedicels up to 2.5 mm; persistent outer tepals c. 2.5 x 1.4 mm, inner tepals c. 2.5 x 1.5 mm; seeds 6, light brown, c. 1 x 0.5 mm, sharply triquetrous with 6-7 longitudinal ridges on the dorsal facet, and 5-6 concentric ridges on each ventral facet, with numerous transverse striae between the ridges.

Fl. & Fr.: January.

Distribution: Very rare; seen only in Mamallapuram sand dunes close to beach area, Kanchipuram district RHT 61774 dt. 6.i.2000.

ACKNOWLEDGEMENTS

I thank Miss D. Selva Raja Prabha for the sketches and Mr. Rajasekharan for composing the illustrations in the computer.

March 29, 2001 FR. K.T. AUGUSTINE S.J.
Rapinat Herbarium,
St. Joseph's College,
Tiruchirapalli 620 002,
Tamil Nadu, India.

45. ADDITIONS TO THE ORCHID FLORA OF MAHARASHTRA

Orchidaceae is one of the largest and economically important families. More than 25,000 species of more than 600 genera are recorded under the family. About 130 genera and 900 species have been recorded from India by J.D. Hooker (1872-1897). For Bombay State, Cooke (1901-1908) reported 31 genera, 85 species and two varieties. Santapau and Kapadia (1966) extended the list of orchids to 116 species and three varieties belonging to 37 genera. Sharma *et al.* (1996) recorded 34 genera, 109 species and three varieties for the State of Maharashtra.

During our field studies in southwestern Maharashtra, we came across four rare and interesting orchids: three terrestrial and one

epiphytic. On critical examination, they were identified as *Epipogium roseum* (D. Don) Lindl. *Gastrochilus flabelliformis* (Blatt. & McC.) Saldh., *Pachystoma senile* (Lindl.) Reichb. f. and *Zeuxine gracilis* (Breda) Bl. The genera *Epipogium* and *Pachystoma* are reported for the first time from Maharashtra. Genus *Epipogium* is represented by 3 species, *Gastrochilus* by 12 species, *Zeuxine* by 15 species and *Pachystoma* by a single species in India (Karthikeyan 1989).

The voucher specimens are deposited in the Herbarium of the Shivaji University, Kolhapur (SUK).

Epipogium roseum (D. Don) Lindl., in J. Linn. Soc. 1: 177. 1857; Sant. in Proc. Nat. in. Sci. India 24 B: 138; Sant. & Kapad. Orch.

Bombay 237. 1966. *Limodorum roseum* D. Don, Prodr. Fl. Nep. 30, Febr. 1825. *Galera rosea* Bl. Bijdr. 416, f. 3, Dec.-1825. *Epipogium nutans* Reichb. f., Bonpland. 5a: 36. 1836; Hook. f. Fl. Brit. India 6: 124. 1890.

Perennial herb; tuber ovoid, horizontal with few short internodes. Scapes leafless, 10-25 cm long, hollow, fleshy, greyish-yellow. Flowers drooping, pedicellate, bracteate; pedicels recurved. Bracts shorter than ovary. Sepals hyaline. Petals white, not very spreading, 3-nerved. Lip as long as or rarely longer than the sepals, concave, irregularly crenulate with the sides raised at the base; upper surface minutely warted in two rows; column white with reddish-brown spots. Spur short, bulbous, pointing backwards. Stigmatic surfaces at the base of column prominent. Ovary broadly ovoid, drooping, pale yellow.

Fl. & Fr.: April-June.

Exsiccata: Sardesai-2035.

Very rare, terrestrial saprophytic herb collected only once on the way to Vishalgad from Amba. Grows in deep shade and is very delicate.

Distribution: Gajapur in Kolhapur district.

Gastrochilus flabelliformis (Blatt. & McC.) Saldh., Fl. Hassan district (Mss.); *Saccolabium flabelliformis* Blatt. & McCann, Rev. Fl. Pres. Bombay, 16: 722. 1932.

Small epiphytic herb. Leaves 2-5, narrowly oblong, falcate with purple tinge and dots, apex unequally 2-lobed. Flowers many in corymbose racemes. Flowers bracteate; bracts persistent. Sepals obovate-oblong, spreading, fleshy, yellow with red blotches near tip. Petals obovate-oblong, spreading, fleshy, yellow with red blotches near tip, slightly shorter and narrower than sepals. Lip minutely lobed with cup-shaped hypochile; epichile slightly deflexed and minutely fimbriate on the outer edges. Column short, footless, wings purple. Pollinia two, globose with slender caudicles.

Fl. & Fr.: March-July.

Specimen Examined: Sardesai-2502.

Distribution: Dodamarg in Sindhudurg and Vasota in Satara district.

Pachystoma senile (Lindl.) Reichb. f. Bonplandia 3: 250. 1958; Hook. f. Fl. Brit. India 5: 812, 1888; Sant. & Kapad., Orchid Bombay 191, 1966. *Apathuria senilis* Lindl., Gen. Sp. Orchid. 130. 1831.

Terrestrial rhizomatous herb. Leaves 1-2, narrowly oblong-lanceolate or acicular, subplicate. Scape 20-30 cm long, erect, sheathed in basal region, glabrous. Flowers 5-6, secund, bracteate, pedicellate in lax racemes, never opening widely, glandular-pubescent. Bracts hyaline, membranous, many nerved, glabrous. Pedicels erect at anthesis, recurved in fruiting. Sepals entire, 5-nerved, shortly pubescent, wider than petals. Petals narrowly spathulate, 3-nerved, pinkish. Lip 3-lobed, clawed at base, sparsely pubescent, mid-lobe larger than side lobes and purple. Disc with 5 prominent longitudinal, parallel ridges. Column arched, glandular pubescent at the base. Pollinia 8.

Fl.: February-March.

Specimen examined: Bachulkar-323.

Distribution: Koyana Nagar in Satara district, Maharashtra.

Zeuxine gracilis (Breda) Bl. Fl. Jav. n.s. 56. t. 18. f. 2. t. 23D. 1858; Sant. & Kapad. Orch. Bombay 171. 1966. *Psychechilos gracile* Breda, Gen. Sp. Orchid Trim. t. 9. 1827. *Monochilus affine* Lindl., Gen. Sp. Orchid. 487. 1840. *Zeuxine affinis* Benth. ex Hook.f. Fl. Brit. India 6: 108. 1890. *Z. blatteri* Fisch. in Gamble Fl. Madras Pres. 1456. 1928.

Delicate herbs, 10-25 cm tall. Rhizomes creeping, sheathed at nodes; fleshy, dark green. Leaves 2-6, olive-green or greyish-green, sheathing at base, subsessile. Spikes glandular, pubescent mixed with long hairs, with 2-3 sheathing bracts. Flowers 3-7 in spikes. Sepals subequal, entire, 1-nerved, glandular-pubescent. Petals entire, 1-nerved, gland dotted, pale-pinkish or pinkish-white. Lip fleshy, strongly saccate at the base, with 2 curved papillae within

the sac. Anther ovoid, pale pink. Capsules ellipsoid, glabrescent.

Fl. & Fr.: February-April.

Specimen examined: Sardesai-2045.

Rare undergrowth in deep shade and moist places.

Distribution: Chandgad, Dajipur, Here and Patgaon in Kolhapur district.

ACKNOWLEDGEMENTS

We thank the Head, Department of Botany, Shivaji University, Kolhapur; the Principal,

Vivekanand College, Kolhapur for facilities and the Botanical Survey of India, Western Circle, Pune for permission to work in the herbarium and library.

January 24, 2001

M.M. SARDESAI

*M.P. BACHULKAR

S.R. YADAV

Department of Botany,

Shivaji University, Kolhapur 416 004,

Maharashtra, India.

**Department of Botany, Vivekanand College,*

Kolhapur 416 003, Maharashtra, India.

REFERENCES

COOKE, T. (1901-1908): The Flora of the Presidency of Bombay. London. (BSI Reprint). Calcutta, Vols. I-III, 1958.

HOOKE, J.D. (1872-1897): The Flora of British India. London. Vols. 7.

KARTHIKEYAN, S., S.K. JAIN, M.P. NAYAR & SANJAPPA (1989): *Florae Indicae Enumeratio:*

Monocotyledonae. Botanical Survey of India.

SANTAPAU, H. & Z. KAPADIA (1966): The Orchids of Bombay. Govt. of India Press. Calcutta.

SHARMA, B.D., S. KARTHIKEYAN & N.P. SINGH (1966): Flora of Maharashtra State – Monocotyledons Botanical Survey of India, Calcutta.

46. ADDITIONS TO THE FLORA OF KARNATAKA

While investigating the flora of Dakshina Kannada and Udupi (erstwhile South Kanara) districts of Karnataka, I came across four species of plants not previously recorded from Karnataka. The following list gives their correct nomenclature, distribution and, flowering and fruiting seasons. The species have been arranged alphabetically. All specimens are deposited at the Botanical Survey of India and in the Herbarium of the Poornaprajna College, Udupi.

1. *Desmodium scorpiurus* (Swartz) Desvaux, Journ. de Bot. Ser. 2, 1: 122. 1813; Dhruvan Tandyekkal & Philip Mathew, Rheedeia 5(2): 177-179, Fig. 1. 1995. *Hedysarum scorpiurus* Swartz, Prodr. Veg. Ind. Occ. 107. 1788 (FABACEAE).

A native of tropical America. In India, it has been reported only from Kerala. This plant

appears to be a recent introduction to coastal Karnataka.

Fl. and Fr.: December-May.

Exsiccata: Udupi district: Udupi, growing along roadsides, October 23, 1999, *K.G. Bhat* 11334.

2. *Quisqualis malabarica* Bedd., Icon. Pl. Ind. Or. 1: 33, t. 155. 1874; Clarke in Hook.f., Fl. Brit. Ind. 2: 460. 1878; Gamble, Fl. Pres. Madras 469. 1919; Gangopadhyay and Chakrabarthy, J. Econ. Tax. Bot. 21(2): 332, Fig. 15. 1997 (COMBRETACEAE).

This endemic species is so far known only from Kerala and Tamil Nadu. The recent collection of this species from Dakshina Kannada is a new record of its extended distribution in S. India.

Gangopadhyay and Chakrabarthy (*l.c.*) in their key for the species of *Quisqualis*,